wherein R1, R2 and R3, which may be same or different, represent hydrogen atom,  $C_3$ - $C_6$  cycloalkyl group, halo  $C_3$ - $C_6$  cycloalkyl group or -A<sup>1</sup>-(G), tin this formula, A<sup>1</sup> represents  $C_1$ - $C_8$  alkylene group,  $C_3$ - $C_6$  alkenylene group or  $C_3$ - $C_6$  alkynylene group; G, which may be same or different, represents hydrogen atom, halogen atom, cyano group, nitro group, halo  $\rm C_1\text{-}C_6$  alkyl group,  $\rm C_3\text{-}C_6$  cycloalkyl group, halo  $\rm C_3\text{-}C_6$ cycloalkyl group, C<sub>1</sub>-C<sub>6</sub> alkoxycarbonyl group, di(C<sub>1</sub>-C<sub>6</sub>) alkoxyphosphoryl group in which the  $(C_1-C_6)$  alkoxy groups may be same or different,  $di(C_1-C_6)$ alkoxythiophosphoryl group in which the (C<sub>1</sub>-C<sub>6</sub>) alkoxy groups may be same or different, diphenylphosphino group, diphenylphosphono group, phenyl group, substituted phenyl group having at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$ alkylthio group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, heterocyclic group (as used herein, the term "heterocyclic group" means pyridyl group, pyridine-N-oxide group, pyrimidinyl group, furyl group, tetrahydrofuryl group, thienyl group, tetrahydrothienyl group, tetrahydropyranyl group, oxazolyl group, isoxazolyl group, oxadiazolyl group, thiazolyl group, isothiazolyl group, thiadiazolyl group, imidazolyl group, triazolyl group or pyrazolyl group), substituted heterocyclic group (the term heterocyclic group is as defined above) having at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>- $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, or  $(-Z_3^3-R^4)$  (in this formula,  $Z_3$  represents -O-, -S-, -SO-, -SO<sub>2</sub>-, -N(R<sup>5</sup>)- (in this formula, R<sup>5</sup>) represents hydrogen atom, C<sub>1</sub>-C<sub>6</sub>

alkylcarbonyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylcarbonyl group, C<sub>1</sub>-C<sub>6</sub> alkoxycarbonyl group, phenylcarbonyl group, substituted phenylcarbonyl group having at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$ alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group and halo  $C_1$ - $C_6$  alkylsulfonyl group, phenyl  $C_1$ - $C_4$  alkoxycarbonyl group, substituted phenyl  $C_1$ - $C_4$  alkoxycarbonyl group having, on the ring thereof, at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>- $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group and halo  $C_1$ - $C_6$  alkylsulfonyl group,  $C_1$ - $C_6$  alkylsulfonyl group or halo  $C_1$ - $C_6$ alkylsulfonyl group), -C(=NOR6)- (in this formula, R6 represents hydrogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_3$ - $C_6$  alkenyl group, halo C<sub>3</sub>-C<sub>6</sub> alkenyl group, C<sub>3</sub>-C<sub>6</sub> alkynyl group, C<sub>3</sub>-C<sub>6</sub> cycloalkyl group, phenyl C<sub>1</sub>-C<sub>4</sub> alkyl group, or substituted phenyl C<sub>1</sub>-C<sub>4</sub> alkyl group having, on the ring thereof, at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>-C<sub>6</sub> alkoxy group, halo C<sub>1</sub>-C<sub>6</sub> alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group and halo  $C_1$ - $C_6$ alkylsulfonyl group), and R<sup>4</sup> represents hydrogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$ alkyl group, C<sub>3</sub>-C<sub>6</sub> alkenyl group, halo C<sub>3</sub>-C<sub>6</sub> alkenyl group, C<sub>3</sub>-C<sub>6</sub> alkynyl group, halo  $\rm C_3$ - $\rm C_6$  alkynyl group,  $\rm C_3$ - $\rm C_6$  cycloalkyl group, halo  $\rm C_3$ - $\rm C_6$  cycloalkyl group,  $\rm C_1$ - $\rm C_6$ alkoxy C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>-C<sub>6</sub> alkylthio C<sub>1</sub>-C<sub>6</sub> alkyl group, formyl group, C<sub>1</sub>-C<sub>6</sub> alkylcarbonyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylcarbonyl group, C<sub>1</sub>-C<sub>6</sub> alkoxycarbonyl group,

mono  $(C_1-C_6)$  alkylaminocarbonyl group,  $\operatorname{di}(C_1-C_6)$  alkylaminocarbonyl group in which the (C<sub>1</sub>-C<sub>6</sub>) alkyl groups may be same or different, mono(C<sub>1</sub>-C<sub>6</sub>) alkylaminothiocarbonyl group, di(C<sub>1</sub>-C<sub>6</sub>) alkylaminothiocarbonyl group in which the  $(C_1-C_6)$  alkyl groups may be same or different,  $di(C_1-C_6)$  alkoxyphosphoryl group in which the  $(C_1-C_6)$  alkoxy groups may be same or different,  $di(C_1-C_6)$ alkoxythiophosphoryl group in which the (C<sub>1</sub>-C<sub>6</sub>) alkoxy groups may be same or different, phenyl group, substituted phenyl group having at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$ alkylthio group, halo C<sub>1</sub>-C<sub>6</sub> alkylthio group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group and halo  $C_1$ - $C_6$  alkylsulfonyl group, phenyl C<sub>1</sub>-C<sub>4</sub> alkyl group, substituted phenyl (C<sub>1</sub>-C<sub>4</sub>) alkyl group having, on the ring thereof, at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>-C<sub>6</sub> alkoxy group, halo C<sub>1</sub>-C<sub>6</sub> alkoxy group, C<sub>1</sub>-C<sub>6</sub> alkylthio group, halo C<sub>1</sub>-C<sub>6</sub> alkylthio group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, heterocyclic group (the term heterocyclic group is as defined above), or substituted heterocyclic group (the term heterocyclic group is as defined above) having at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>-C<sub>6</sub> alkoxy group, halo C<sub>1</sub>-C<sub>6</sub> alkoxy group, C<sub>1</sub>-C<sub>6</sub> alkylthio group, halo C<sub>1</sub>-C<sub>6</sub> alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group and halo  $C_1$ - $C_6$  alkylsulfonyl group); and r represents an integer of 1 to 4); further, R1 and R2 may be taken conjointly to form 4- to 7-membered rings which may be intercepted by 1 to 3, same or different oxygen atom, sulfur atom or nitrogen

atom;

X, which may be same or different, represents halogen atom, cyano group, nitro group, C<sub>3</sub>-C<sub>6</sub> cycloalkyl group, halo C<sub>3</sub>-C<sub>6</sub> cycloalkyl group, phenyl group, substituted phenyl group having at least one, same or different substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$ alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$ alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, heterocyclic group (the term heterocyclic group is as defined above), substituted heterocyclic group (the term heterocyclic group is as defined above) having at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>-C<sub>6</sub> alkoxy group, halo C<sub>1</sub>-C<sub>6</sub> alkoxy group, C<sub>1</sub>-C<sub>6</sub> alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, or -A<sup>2</sup>-R<sup>7</sup> [in this formula, A2 represents -O-, -S-, -SO-, -SO<sub>2</sub>-, -NR8- (in this formula R8 represents hydrogen atom,  $C_1$ - $C_6$  alkylcarbonyl group, halo  $C_1$ - $C_6$  alkylcarbonyl group,  $C_1$ - $C_6$ alkoxycarbonyl group, phenylcarbonyl group, substituted phenylcarbonyl group having at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>-C<sub>6</sub> alkoxy group, halo  $\rm C_1$ - $\rm C_6$  alkylthio group,  $\rm C_1$ - $\rm C_6$  alkylthio group,  $\rm C_1$ - $\rm C_6$  alkylthio group,  $\rm C_1$ - $\rm C_6$ alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, phenyl C<sub>1</sub>-C<sub>4</sub> alkoxycarbonyl group or substituted phenyl C₁-C₄ alkoxycarbonyl group having, on the ring thereof, at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>-C<sub>6</sub> alkoxy group, halo C<sub>1</sub>-C<sub>6</sub> alkoxy group, C<sub>1</sub>-

C<sub>6</sub> alkylthio group, halo C<sub>1</sub>-C<sub>6</sub> alkylthio group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group), -C(=O)-,  $-C(=NOR^6)$ - (in this formula,  $R^6$  is as defined above),  $C_1$ - $C_6$  alkylene group, halo  $C_1$ - $C_6$  alkylene group,  $C_2$ - $C_6$  alkenylene group, halo  $C_2$ - $C_6$  alkenylene group,  $C_2$ - $C_6$  alkynylene group or halo  $C_3$ - $C_6$  alkynylene group; and

in cases where A2 represents -O-, -S-, -SO-, -SO2- or -NR8- (in this (1) formula, R8 is as defined above), R7 represents hydrogen atom, halo C3-C6 cycloalkyl group, halo C<sub>3</sub>-C<sub>6</sub> cycloalkenyl group, phenyl group, substituted phenyl group having at least one, same or different substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$ alkysulfinyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, heterocyclic group (the term heterocyclic group is as defined above), substituted heterocyclic group (the term heterocyclic group is as defined above) having at least one, same or different substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$ alkoxy group, halo C<sub>1</sub>-C<sub>6</sub> alkoxy group, C<sub>1</sub>-C<sub>6</sub> alkylthio group, halo C<sub>1</sub>-C<sub>6</sub> alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group and halo  $C_1$ - $C_6$  alkylsulfonyl group, or -A $^3$ -R $^9$  (in this formula, A $^3$  represents  $C_1$ - $C_6$  alkylene group, halo  $C_1$ - $C_6$  alkylene group,  $C_3$ - $C_6$  alkenylene group, halo  $C_3$ - $C_6$ alkenylene group, C<sub>3</sub>-C<sub>6</sub> alkynylene group or halo C<sub>3</sub>-C<sub>6</sub> alkynylene group; and R<sup>9</sup> represents hydrogen atom, halogen atom, C<sub>3</sub>-C<sub>6</sub> cycloalkyl group, halo C<sub>3</sub>-C<sub>6</sub> cycloalkyl group,  $C_1$ - $C_6$  alkoxycarbonyl group, phenyl group, substituted phenyl group having at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>-C<sub>6</sub> alkoxy

group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, or -A<sup>4</sup>-R<sup>10</sup> (in this formula, A<sup>4</sup> represents -O-, -S-, -SO-, -SO<sub>2</sub>- or -C(=O)-; and  $R^{10}$  represents  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group, C<sub>3</sub>-C<sub>6</sub> alkenyl group, halo C<sub>3</sub>-C<sub>6</sub> alkenyl group, C<sub>3</sub>-C<sub>6</sub> cycloalkyl group, halo C<sub>3</sub>-C<sub>6</sub> cycloalkyl group, phenyl group, substituted phenyl group having at least one, same or different substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group, C<sub>1</sub>-C<sub>6</sub> alkylthio group, halo C<sub>1</sub>-C<sub>6</sub> alkylthio group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group and halo  $C_1$ - $C_6$  alkylsulfonyl group, heterocyclic group (the term heterocyclic group is as defined above), or substituted heterocyclic group (the term heterocyclic group is as defined above) having at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>-C<sub>6</sub> alkoxy group, halo C<sub>1</sub>-C<sub>6</sub> alkoxy group, C<sub>1</sub>-C<sub>6</sub> alkylthio group, halo C<sub>1</sub>-C<sub>6</sub> alkylthio group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group));

in cases where  $A^2$  represents -C(=O)- or  $-C(=NOR^6)$ - (in this formula,  $R^6$  is as defined above),  $R^7$  represents hydrogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_2$ - $C_6$  alkenyl group, halo  $C_2$ - $C_6$  alkenyl group,  $C_3$ - $C_6$  cycloalkyl group, halo  $C_3$ - $C_6$  cycloalkyl group,  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, mono( $C_1$ - $C_6$ ) alkylamino group, di( $C_1$ - $C_6$ ) alkylamino group in which the ( $C_1$ - $C_6$ ) alkyl groups may be same or different, phenyl group, substituted phenyl group having at least one, same or different substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group,

halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group and halo  $C_1$ - $C_6$  alkylsulfonyl group, phenylamino group, substituted phenylamino group having, on the ring thereof, at least one, same or different substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group and halo  $C_1$ - $C_6$  alkylsulfonyl group, heterocyclic group (the term heterocyclic group is as defined above), or substituted heterocyclic group (the term heterocyclic group is as defined above) having at least one, same or different substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_$ 

(3) in cases where  $A^2$  represents  $C_1$ - $C_6$  alkylene group, halo  $C_1$ - $C_6$  alkylene group,  $C_2$ - $C_6$  alkenylene group, halo  $C_2$ - $C_6$  alkenylene group,  $C_2$ - $C_6$  alkynylene group or halo  $C_3$ - $C_6$  alkynylene group,  $R^7$  represents hydrogen atom, halogen atom,  $C_3$ - $C_6$  cycloalkyl group, halo  $C_3$ - $C_6$  cycloalkyl group,  $C_1$ - $C_6$  alkoxycarbonyl group, tri( $C_1$ - $C_6$ ) alkylsilyl group in which the ( $C_1$ - $C_6$ ) alkyl groups may be same or different, phenyl group, substituted phenyl group having at least one, same or different substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group, heterocyclic group (the term heterocyclic group is as defined above),

substituted heterocyclic group (the term heterocyclic group is as defined above) having at least one, same or different substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group, halo C<sub>1</sub>-C<sub>6</sub> alkoxy group, C<sub>1</sub>-C<sub>6</sub> alkylthio group, halo C<sub>1</sub>-C<sub>6</sub> alkylthio group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, halo  $\rm C_1\text{-}C_6$  alkylsulfinyl group,  $\rm C_1\text{-}C_6$  alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, or -A<sup>5</sup>-R<sup>11</sup> (in this formula, A<sup>5</sup> represents -O-, -S-, -SO- or - $SO_2$ -; and  $R^{11}$  represents  $C_3$ - $C_6$  cycloalkyl group, halo  $C_3$ - $C_6$  cycloalkyl group, phenyl group, substituted phenyl group having at lest one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo C<sub>1</sub>-C<sub>6</sub> alkylthio group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group and halo  $C_1$ - $C_6$  alkylsulfonyl group, heterocyclic group (the term heterocyclic group is as defined above), substituted heterocyclic group (the term heterocyclic group is as defined above) having at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $\rm C_1$ - $\rm C_6$  alkylsulfonyl group and halo  $\rm C_1$ - $\rm C_6$  alkylsulfonyl group, or -A $^6$ -R $^{12}$  (in this formula, A<sup>6</sup> represents C<sub>1</sub>-C<sub>6</sub> alkylene group, halo C<sub>1</sub>-C<sub>6</sub> alkylene group, C<sub>2</sub>-C<sub>6</sub> alkenylene group, halo  $C_2$ - $C_6$  alkenylene group,  $C_2$ - $C_6$  alkynylene group or halo  $C_3$ -C<sub>6</sub> alkynylene group; and R<sup>12</sup> represents hydrogen atom, halogen atom, C<sub>3</sub>-C<sub>6</sub> cycloalkyl group, halo  $C_3$ - $C_6$  cycloalkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group, C<sub>1</sub>-C<sub>6</sub> alkylthio group, halo C<sub>1</sub>-C<sub>6</sub> alkylthio group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group, halo  $C_1$ - $C_6$  alkylsulfonyl group, phenyl group, substituted phenyl group having at least one, same or different

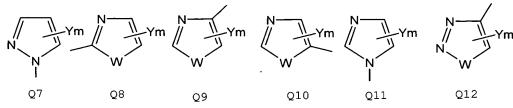
C'

substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, phenoxy group, substituted phenoxy group having at least one, same or different substituents selected from the group consisting of halogen atom,  $\rm C_1\text{-}C_6$  alkyl group, halo  $\rm C_1\text{-}C_6$ alkyl group, C<sub>1</sub>-C<sub>6</sub> alkoxy group, halo C<sub>1</sub>-C<sub>6</sub> alkoxy group, C<sub>1</sub>-C<sub>6</sub> alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$ alkylsulfonyl group and halo  $C_1$ - $C_6$  alkylsulfonyl group, phenylthio group, substituted phenylthio group having at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>- $\rm C_6$  alkoxy group,  $\rm C_1$ - $\rm C_6$  alkoxy group,  $\rm C_1$ - $\rm C_6$  alkylthio group, halo  $\rm C_1$ - $\rm C_6$  alkylthio group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group and halo  $C_1$ - $C_6$  alkylsulfonyl group, heterocyclic group (the term heterocyclic group is as defined above), or substituted heterocyclic group (the term heterocyclic group is as defined above) having at least one, same or different substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$ alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo C<sub>1</sub>-C<sub>6</sub> alkylthio group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group))];

n represents an integer of 0 to 4; further, X may be taken conjointly with the adjacent carbon atom on the phenyl ring to form a fused ring (as used herein, the term fused ring means naphthalene, tetrahydronaphthalene, indene, indane, quinoline, quinazoline, chroman, isochroman, indole, indoline, benzodioxane, benzodioxole, benzofuran, dihydrobenzofuran, benzothiophene,

dihydrobenzothiophene, benzoxazole, benzothiazole, benzimidazole or indazole), and said fused ring may have at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group,  $\rm C_1$ - $\rm C_6$  alkoxy group, halo  $\rm C_1$ - $\rm C_6$  alkoxy group,  $\rm C_1$ - $\rm C_6$  alkylthio group, halo  $\rm C_1$ - $\rm C_6$ alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$ alkylsulfonyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, phenyl group, substituted phenyl group having at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>-C<sub>6</sub> alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ -C<sub>6</sub> alkylsulfinyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group and halo  $\mathrm{C_{1}\text{-}C_{6}}$  alkylsulfonyl group, heterocyclic group (the term heterocyclic group is as defined above), and substituted heterocyclic group (the term heterocyclic group is as defined above) having at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>-C<sub>6</sub> alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group;

Q represents an N-, S- or O-containing, optionally substituted, heterocyclic group or fused heterocyclic group, selected from the group consisting of the following formulas Q1 to Q60;



Q49

Q55

Q58

Q54

Q57

O

(in these formulas, Y, which may be same or different, represents halogen atom, cyano group, nitro group, halo C<sub>3</sub>-C<sub>6</sub> cycloalkyl group, phenyl group, substituted phenyl group having at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>-C<sub>6</sub> alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, heterocyclic group (the term heterocyclic group is as defined above), substituted heterocyclic group (the term heterocyclic group is as defined above) having at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo C<sub>1</sub>-C<sub>6</sub> alkylthio group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, or -A<sup>2</sup>-R<sup>7</sup> (in this formula, A<sup>2</sup> and R<sup>7</sup> are as defined above); m represents an integer of 0 to 6; R<sup>13</sup> in the formula Q22 and Q23 represents hydrogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group, C<sub>3</sub>-C<sub>6</sub> alkenyl group, halo C<sub>3</sub>-C<sub>6</sub> alkenyl group, C<sub>3</sub>-C<sub>6</sub> alkynyl group, halo C<sub>3</sub>-C<sub>6</sub> alkynyl group, C<sub>3</sub>-C<sub>6</sub> cycloalkyl group, halo C<sub>3</sub>-C<sub>6</sub> cycloalkyl group, C<sub>1</sub>-C<sub>6</sub> alkoxy C<sub>1</sub>- $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkoxy  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkylthio  $C_1$ - $C_6$  alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylthio C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>- $C_6$  alkylsulfinyl  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkylsulfonyl  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$ alkylsulfonyl C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, C<sub>1</sub>-C<sub>6</sub> alkylcarbonyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylcarbonyl group, C<sub>1</sub>-C<sub>6</sub> alkoxycarbonyl group, phenyl group, substituted phenyl group having at least one, same or different substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy

group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, phenyl C<sub>1</sub>-C<sub>4</sub> alkyl group, substituted phenyl C<sub>1</sub>-C<sub>4</sub> alkyl group having, on the ring thereof, at least one, same or different substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, phenylcarbonyl group, or substituted phenylcarbonyl group having at least one, same or different substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group);

alternatively, Y may be taken conjointly with adjacent carbon atom on the ring to form a fused ring (the fused ring is as defined above), and said fused ring may have at least one, same or different substituents selected from the group consisting of halogen atom, C<sub>1</sub>-C<sub>6</sub> alkyl group, halo C<sub>1</sub>-C<sub>6</sub> alkyl group, C<sub>1</sub>-C<sub>6</sub> alkoxy group, halo  $C_1$ - $C_6$  alkoxy group,  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group,  $C_1$ - $C_6$  alkylsulfonyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, phenyl group, substituted phenyl group having at least one, same or different substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$ alkoxy group, C<sub>1</sub>-C<sub>6</sub> alkylthio group, halo C<sub>1</sub>-C<sub>6</sub> alkylthio group, C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, halo C<sub>1</sub>-C<sub>6</sub> alkylsulfinyl group, C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group and halo C<sub>1</sub>-C<sub>6</sub> alkylsulfonyl group, heterocyclic group (the term heterocyclic group is as defined

minime in in which had not been the

above), and substituted heterocyclic group (the term heterocyclic group is as defined above) having at least one, same or different substituents selected from the group consisting of halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group, and halo  $C_1$ - $C_6$  alkylsulfonyl group;

W represents O, S or N-R<sup>13</sup> (in this formula, R<sup>13</sup> is as defined above); and  $Z^1$  and  $Z^2$  represent oxygen atom or sulfur atom;

provided that (1) when X,  $R^1$  and  $R^3$  simultaneously represent hydrogen atom,  $Z^1$  and  $Z^2$  simultaneously represent oxygen atom,  $Z^2$  are chlorine atom of 2-position, then  $Z^2$  is not 1,2,2-trimethylpropyl group.

- (2) when X, R¹ and R³ simultaneously represent hydrogen atom, Z¹ and Z² simultaneously represent oxygen atom, Q represents Q27 and m is 0, then R² is not 1,2,2-trimethylpropyl group, and
- (3) when X,  $R^1$  and  $R^3$  simultaneously represent hydrogen atom,  $Z^1$  and  $Z^2$  simultaneously represent oxygen atom, Q represents Q16 and Y represents methylthio group, then  $R^2$  is not hydrogen atom and methyl group.

Claim 4. (Amended) A heterocyclic amine derivative represented by the following general formula (IV'):

 $Q'-NH_2$  (IV')

wherein:

in cases where Q' represents one of Q26, Q32 and Q34,

Y, which may be same or different, represents halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkyl-sulfonyl group or halo  $C_1$ - $C_6$  alkylsulfonyl group, m represents an integer of 1 to 4, and at least one of Y, of which total number is m, is perfluoro  $C_2$ - $C_6$  alkyl group; and

in a case where Q' represents Q27:

Y, which may be same or different, represents halogen atom,  $C_1$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkyl group,  $C_1$ - $C_6$  alkoxy group, halo  $C_1$ - $C_6$  alkylthio group, halo  $C_1$ - $C_6$  alkylthio group,  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfinyl group, halo  $C_1$ - $C_6$  alkylsulfonyl group, m represents an integer of 1 to 4, and at least one of Y, of which total number is m, is perfluoro  $C_2$ - $C_6$  alkyl group, halo  $C_1$ - $C_6$  alkoxy group or halo  $C_1$ - $C_6$  alkylthio group,

provided that Y is not 2,2,2-trifluoroethoxy group.